



Disease Detectives

Communicable Disease Control *UPDATE*

MECKLENBURG COUNTY HEALTH DEPARTMENT
A Quarterly Publication

NC State Health Director Urges Tdap Vaccine

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Recent outbreaks of pertussis (whooping cough) across the state have renewed calls from state health officials for North Carolinians to be immunized against

this highly contagious but preventable respiratory disease.

In response to the outbreak, the North Carolina Department of Health and Human Services-administered Immunization Program (NCIP) has made Tdap vaccine, which offers protection for pertussis, available to anyone age 7 years and older, including adults, regardless of their insurance status. DHHS is providing the Tdap vaccine to health care providers in the NCIP network, which includes all local health departments and many public and private health-care providers.

Between December and the first week of June, state public health officials tracked 179 cases of whooping cough covering 23 counties; Alamance County alone has seen 122 cases. In all of 2011, there were just 126 cases of pertussis reported to the state. Mecklenburg County has reported 5 cases through the end of June 2012. In 2011, 8 cases were reported for the year.

The disease does not only affect children; adults also can develop whooping cough and are often not diagnosed until later in the illness. Pertussis is spread from per-

son to person usually by coughing or sneezing while in close contact with others.

The Tdap booster shot is recommended for any child 7–10 years of age who did not complete the childhood DTaP vaccination series and anyone 11 and older who has not yet received a Tdap booster. Tdap is particularly recommended for:

- women who are pregnant or may become pregnant;
- all close contacts of infants under 12 months of age (parents, siblings, grandparents, household contacts, child care providers); and
- anyone with a pre-existing, chronic respiratory disease.

The DTaP vaccination series is recommended for children starting at 2 months of age, and continuing at 4 months, 6 months, 15-18 months and 4-6 years of age. A Tdap booster shot should be given to children by 11 years of age because immunity from the childhood vaccines wears off over time. Teens and adults who haven't yet received a pertussis booster shot should also be vaccinated. For information on the recommended prophylaxis for pertussis contacts, see page 4.

Additional information can be found at [Centers for Disease Control and Prevention](http://CentersforDiseaseControlandPrevention) and [NC Immunization Branch](http://NCImmunizationBranch) websites or contact Beth Young at Eliza.beth.Young@MecklenburgCountyNC.gov or 704.336.5076.

Increase in Hand, Foot, Mouth Disease



Hand, Foot, Mouth Disease (HFMD) is an acute, self limiting,

vesicular stomatitis, characterized by sudden onset of fever, sore throat, and small papulovesicular pharyngeal lesions, which may also appear as exanthem; especially on the palms, fingers, and soles. The incubation period is 3-5 days and is initially spread through respiratory droplet and will shed in the stool for several weeks.

Summer is the peak season for HFMD. While this disease remains non-reportable, Communicable Disease Control nurses have seen an increase in the number of calls requesting information on the exclusion criteria for child care facilities. The current recommendation is not to exclude children based on diagnosis alone. However, other exclusion criteria may apply.

A child shall not attend child care if they have fever (above 101.0°F orally/100.0°F axillary, 102.0°F rectally), has diarrhea, nausea/vomiting, draining blisters, or inability to participate or requires additional care than a healthy individual. The child may return to care 24 hours after symptoms have resolved independently of medication. NC Child Care Rules (10A NCAC .09 .0804 **NC Child Care Rules**) require exclusion for the following symptoms:

- (1) have sudden onset of diarrhea characterized by an increased number of bowel movements compared to the child's normal pattern and with increased stool water; or
- (2) have two or more episodes of

- vomiting within a 12 hour period; or
- (3) have a red eye with white or yellow eye discharge until 24 hours after treatment; or
- (4) have scabies or lice; or
- (5) have known chicken pox or a rash suggestive of chicken pox; or
- (6) have tuberculosis, until a health professional states that the child is not infectious; or
- (7) have strep throat, until 24 hours after treatment has started; or
- (8) have pertussis, until five days after appropriate antibiotic treatment; or
- (9) have hepatitis A virus infection, until one week after onset of illness or jaundice; or
- (10) have impetigo, until 24 hours after treatment; or
- (11) have a physician's or other health professional's written order that the child be separated from other children.

The North Carolina Division of Public Health sent out a **memo** on June 1 (revised May 30 memo) to address recommendations for HFMD, including keeping ill children at home until fever resolves and child is able to participate in typical activities .

Licensed child care facilities are inspected by the Mecklenburg County Health Department, Environmental Health Division, biannually, and are required to demonstrate strict hand washing, diaper changing, and sanitizing/disinfecting practices for illness prevention and control. All licensed child care facility inspection reports can be found online at **Inspection Search**.

For additional information on HFMD please contact, Beth Young at **Elizbeth.Young@MecklenburgCountyNC.gov** or 704.336.5076.

This periodical is written and distributed quarterly by the Communicable Disease Control Program of the Mecklenburg County Health Department for the purpose of updating the medical community in the activities of Communicable Disease Control. Program members include: Health Director—E. Wynn Mabry, MD; Medical Director—Stephen R. Keener, MD; Deputy Health Director—Bobby Cobb; , CD Control—Carmel Clements; Sr. Health Manager—Lorraine Houser; CD Control nurses—Freda Grant, Jane Hoffman, Penny Moore, Beth Quinn, Belinda Worsham; —Elizabeth Young (Childcare nurse), Earlene Campbell-Coleman (TB Outreach/Adult Day Health); Rabies/Zoonosis Control—Al Piercy; Health Supervisor—Carlos McCoy; DIS—Mary Ann Curtis, John Little, Michael Rogers, Jose' Pena; Preparedness Coordinator—Bobby Kennedy; Office Assistants—Pamela Blount, Vivian Brown, Janet Contreras.

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Co-Editors

Did you know...

...Communicable Disease Control is partnering with NC Division of Public Health to provide health surveillance activities for the DNC? All medical providers will be receiving information on these activities later in August. CD Control will contact Emergency Departments and Urgent Care facilities to obtain contact information. If you do not already receive Health Advisories from the Health Department, please sign up to receive these at the **Health Department's website**.

Management of HBV in Health Care Providers

The CDC recently updated the recommendations for the management of Hepatitis B Virus (HBV)-infected health-care providers and students. This report updates the 1991 CDC recommendations for the management of hepatitis B virus –infected health-care providers and students to reduce the risk of transmitting HBV to patients during the conduct of exposure-prone invasive procedures. This update reflects the changes in the epidemiology of HBV infection in the United States and advances in the medical management of chronic HBV infection since 1991.

Recommendations Include:

1. Chronic HBV infection in itself should not preclude the practice or study of medicine, surgery, dentistry, or allied health professions. Standard precautions should be adhered to rigorously in all health-care set-

tings for the protection of both patient and provider.

2. All health-care providers and students should receive hepatitis B vaccine according to current CDC recommendations. Vaccination (3-dose series) should be followed by assessment of hepatitis B surface antibody to determine vaccination immunogenicity and, if necessary, revaccination.

3. Providers who will perform exposure-prone procedures should receive pre-vaccination testing for chronic HBV infection.

4. Providers, residents, and medical and dental students with active HBV infection (i.e., those who are HBsAg-positive) who do not perform exposure-prone procedures but who practice non- or minimally invasive procedures should not be subject to any restrictions of their activities or study.

5. HBV-infected providers can con-

duct exposure-prone procedures if a low or undetectable HBV viral load is documented by regular testing at least every 6 months (unless higher levels require more frequent testing; for example, as drug therapy is added or modified or testing is repeated to determine if elevations above a threshold are transient). Confidentiality of the health-care provider's or student's HBV serologic status should be maintained.

6. Hospitals, medical and dental schools, and other institutions should have written policies and procedures for the identification and management of HBV-infected health-care providers, students, and school applicants.

For further details refer to July 6, 2012, *Recommendations and Reports* published in the "Morbidity and Mortality Weekly Report" at www.cdc.gov/mmwr.

CDC– A Timeline

1978 Alcorn County, Mississippi, reported cases of the first outbreak of tuberculosis resistance to formerly effective drugs.

1979 First *Healthy People* report published.

1980 MMWR published the first report on a newly recognized illness associated with tampon use: toxic shock syndrome.

1981 The first diagnosis of the fatal disease later known as AIDS was described in the June 5, 1981, issue of the *MMWR*.

1982 CDC advised of the possible risk of Reye syndrome associated with the use of aspirin by children with chickenpox and flu-like symptoms.

1983 CDC established a Violence Epidemiology Branch to apply public health prevention strategies to child abuse, homicide, and suicide.

1984 CDC studied Vietnam veterans who were exposed to Agent Orange during combat and later fathered babies; no increased risk of birth

defects was found.

1985 CDC study stated polysaccharide, a new vaccine, was a cost-effective means to protect children who were at risk for developing *Hae-mophilus influenzae*.

1986 The Office on Smoking and Health became part of CDC.

1987 CDC reported that about 7,000 workers die on the job annually; 42 percent of female workers who die on the job are murdered.

1988 CDC established the National Center for Chronic Disease Prevention and Health Promotion.

1989 CDC reported every 6 of 10 killings involved guns, making firearms the 8th leading cause of death.

1990 For the first time, CDC reported the possible transmission of HIV from a dentist to a patient in Florida during an invasive procedure.

1991 PHS recommended all women of childbearing years consume 400 mg of folic acid/day to reduce the risk of pregnancies affected by

spina bifida and anencephaly.

1992 The National Academy of Sciences reported on a dangerous new phenomenon: the emergence of new and virulent diseases that are resistant to antibiotics.

1993 CDC investigated an outbreak of hantavirus, a mysterious illness in the southwestern United States.

1994 Polio elimination was certified in the Americas.

1995 CDC recommended offering HIV testing to all pregnant women.

1996 CDC found measurable levels of serum cotinine, a byproduct of nicotine, in the blood of 88 percent of American nonsmokers.

1997 CDC participated in the nationally televised White House event of the Presidential Apology for the Tuskegee Study.

1998 For the first time since 1981, AIDS was diagnosed in more African-American and Hispanic men than in gay white men.

Next issue: 1999–2011

Raw Seafood Has Its Risk

CD Control recently investigated and reported two cases of *Vibrio parahaemolyticus*, an illness associated with raw seafood. *Vibrio parahaemolyticus* is a bacterium in the same family as those that cause cholera. It lives in brackish saltwater and causes gastrointestinal illness in humans. *V. parahaemolyticus* naturally inhabits coastal waters in the United States and Canada and is present in higher concentrations during summer; it is a halophilic, or salt-requiring organism.

Most people become infected by eating raw or undercooked shellfish, particularly oysters. Less commonly, this organism can cause an infection in the skin when an open wound is exposed to warm seawater.

When ingested, *V. parahaemolyticus* causes watery diarrhea often with abdominal cramping, nausea, vomiting, fever and chills. Usually these symptoms occur within 24 hours of ingestion. Illness is usually self-limited and lasts 3 days. Severe disease is rare and occurs more commonly in persons with weakened immune systems. A physician should suspect *V. parahaemolyticus*

infection if a patient has watery diarrhea and has eaten raw or undercooked seafood, especially oysters, or when a wound infection occurs after exposure to seawater. *Vibrio* organisms can be isolated from cultures of stool, wound, or blood.

Another, more serious vibrio infection, contracted the same way is *Vibrio vulnificus*. Among healthy people, ingestion of *V. vulnificus* can cause vomiting, diarrhea, and abdominal pain. In immunocompromised persons, particularly those with chronic liver disease, *V. vulnificus* can infect the bloodstream, causing a severe and life-threatening illness characterized by fever and chills, decreased blood pressure (septic shock), and blistering skin lesions. *V. vulnificus* bloodstream infections are fatal about 50% of the time.

Both forms of vibrio are considered rare diseases but CDC believes they are grossly underreported. Although *vibrio parahaemolyticus* infections do not usually require treatment, if *V. vulnificus* is suspected, treatment should be initiated immediately because antibiotics improve survival.

Most infections caused by *V. parahaemolyticus* and *V. vulnificus* in the United States can be prevented by thoroughly cooking seafood, especially oysters. Wound infections can be prevented by avoiding exposure of open wounds to warm seawater. When an outbreak is traced to an oyster bed, health officials recommend closing the oyster bed until conditions are less favorable for *V. parahaemolyticus*.

Timely reporting of *V. parahaemolyticus* infections to state health departments and to regional offices of the Food and Drug Administration (FDA) will help collaborative efforts to improve investigation of these infections. Regional FDA specialists with expert knowledge about shellfish assist state officials with tracebacks of shellfish. When notified rapidly about cases, officials can sample harvest waters to discover possible sources of infection and may close oyster beds.

For more information, contact Belinda Worsham at 704.336.5498 or Belinda.Worsham@MecklenburgCountyNC.gov.

Child Care Spotlight: Blood Exposure Testing

Children between the ages of 12-36 months frequently explore and interact orally with their environment. Biting can frequently be included in this interaction and often occurs in child care. While biting is considered developmentally appropriate, it continues to pose a potential threat, although minimal, for the transmission of HIV, Hepatitis B, and Hepatitis C, through the exchange of blood and bodily fluids.

The NC Administrative Codes 10A 41A. .0202, .0203, .0214 (HIV, Hepatitis B, and Hepatitis C Control Measures) require the attending physician to test the source individual unless they are already known to be infected. In a bite with blood exposure both children are considered potential source persons and both

shall be tested for

- HIV
- Hepatitis B Surface Antigen
- Hepatitis C Surface Antibody

The attending physician of the source person shall notify the attending physician of the exposed person the infection status of the source.

Article 4 of AC 10A NCAC 41A.0214 adds testing for Hepatitis C (along with Hepatitis B and HIV) for bloodborne pathogen exposures in all settings. The Health Department added testing and enforcement of control measures for hepatitis C for bloodborne pathogen exposures on 4/1/2012.

Communicable Disease Control nurses investigate blood exposures in child care settings and will determine if testing is necessary. Frequently there are incidents that may involve blood but investigation determines that blood has not been exchanged between parties and no testing is required.

Children with private physicians are encouraged to have the testing ordered and reviewed by their personal physicians. The Mecklenburg County Health Department may provide testing but pre approval is necessary.

For more information, contact Beth Young at 704.336.5076 or Elizabeth.Young@MecklenburgCountyNC.gov.

Whooping Cough-It's Back!



Pertussis, or whooping cough, again is a concern in Mecklenburg County and throughout North Carolina. Since several new cases of pertussis are currently being

investigated, the Mecklenburg County Health Department's Communicable Disease Control Program strongly encourages practitioners to take the following steps when a patient exhibits signs and symptoms of pertussis:

- Report pertussis within 24 hours to the Health Department at 704.336.2817 or to any of the CD nurses listed on page 7
- Obtain culture and PCR (nasopharyngeal swab) if it has been less than 3 weeks since symptom onset (test kits available from the [NC State Laboratory of Public Health](#))
- Treat symptomatic patients with an approved regimen (see below) and isolate the patient for 5 days
- Preventively treat family members/contacts with an approved regimen (see below)

- Ensure age-appropriate vaccination for children
- Encourage immunization of adolescents and adults with Tdap vaccine

CDC recommends administration of chemoprophylaxis to all close contacts and all household members of a pertussis case-patient, regardless of age and vaccination status; this might prevent or minimize transmission. A close contact is anyone who had face-to-face contact or shared a confined space for a prolonged period of time with an infected person or had direct contact with respiratory secretions from a symptomatic person. Contact with respiratory secretions can occur in many ways, including through an explosive cough or sneeze in the face, sharing food or eating utensils, mouth-to-mouth resuscitation, and conducting a medical exam which includes nose and throat examination.

Approved treatment regimens for cases and their contacts are as follows:

Azithromycin:

Infants less than 6 months of age: 10 mg/kg per day for 5 days

Infants and children at least 6 months of age: 10 mg/kg on day 1 (maximum 500 mg), followed by 5 mg/kg on days 2-5 (maximum 250 mg)
Adults: 500mg/day on day 1, followed by 250 mg per day on days 2-5 **Or**

Erythromycin:

40-50 mg/kg/day in four divided doses for 14 days
Adults or persons greater than or equal to 95 lbs: 2 grams/day in 4 divided doses for 14 days **Or**

TMP-SMZ:

Trimethoprim (TMP) 8 mg/kg/day/
Sulfamethoxazole (SMZ) 40 mg/kg/day in two divided doses for 14 days
Adults or persons greater than or equal to 80 lbs: TMP 320 mg/day/
SMZ 1600mg/day in 2 divided doses (1 DS tablet twice a day) for 14 days **Or**

Clarithromycin:

15 mg/kg/day (maximum 1 gram/day) for 7 days

Recommendations for medical management of Whooping Cough can be obtained at the [CDC's Clinician website](#) or the CDC's [Pink Book](#).

Typhoid fever is a serious bacterial infection caused by the bacterium *Salmonella typhi* and remains common in the developing world. Over 21 million persons are infected each year worldwide. Approximately 400 cases occur annually in the United States. The highest risk of infection is for travelers to countries where typhoid fever is endemic.

North Carolina reported thirty-six cases of acute typhoid fever between 2007-2011. Twelve cases between the ages of 3 and 68 years were reported in Mecklenburg County. Eleven traveled to India and one to

Indonesia. None reported receiving typhoid vaccine within two years prior to their travel.

This infection is spread by ingestion of contaminated food or water. Symptoms may include fever, headache, weakness, abdominal pain, and loss of appetite. Two vaccines are available for persons traveling to endemic areas. The first is a single dose polysaccharide antigen vaccine approved for person's age 2 years and up with a booster needed every 2 years. The second is a live, oral vaccine given in four doses approved for person's age 6 years and up with a booster every 5

years.

While traveling in developing countries: drink bottled carbonated water;; avoid ice unless it is made from bottled or boiled water; eat foods that are thoroughly cooked and steaming hot; avoid raw fruits and vegetables unless you can peel them yourself; and avoid food and beverages from street vendors. For travel recommendations go to <http://www.cdc.gov/travel>.

For more information, contact Jane Hoffman at Jane.Hoffman@MecklenburgCountyNC.gov or 704.336.5490.

Typhoid Fever

NC Electronic Disease Surveillance System

NC EDSS EVENT ID# _____

North Carolina Department of Health and Human Services
Division of Public Health • Epidemiology Section
Communicable Disease Branch



Confidential Communicable Disease Report—Part 1

NC DISEASE CODE
(see reverse side for code)

ATTENTION HEALTH CARE PROVIDERS:

Please report relevant clinical findings about this disease event to the local health department.

Patient's Last Name		First	Middle	Suffix	Maiden/Other	Alias
Birthdate (mm/dd/yyyy)		Sex <input type="checkbox"/> M <input type="checkbox"/> F <input type="checkbox"/> Trans.		Parent or Guardian (of minors)		Patient Identifier SSN
Patient's Street Address			City	State	ZIP	County
Age _____ Age Type <input type="checkbox"/> Years <input type="checkbox"/> Months <input type="checkbox"/> Weeks <input type="checkbox"/> Days			Race (check all that apply): <input type="checkbox"/> White <input type="checkbox"/> Black/African American <input type="checkbox"/> American Indian/Alaska Native <input type="checkbox"/> Native Hawaiian or Pacific Islander		Ethnic Origin <input type="checkbox"/> Asian <input type="checkbox"/> Other <input type="checkbox"/> Hispanic <input type="checkbox"/> Non-Hispanic	
Was patient hospitalized for this disease? (>24 hours) <input type="checkbox"/> Yes <input type="checkbox"/> No			Did patient die from this disease? <input type="checkbox"/> Yes <input type="checkbox"/> No		Is the patient pregnant? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Patient is associated with (check all that apply): <input type="checkbox"/> Child Care (child, household contact, or worker in child care) <input type="checkbox"/> School (student or worker) <input type="checkbox"/> College/University (student or worker) <input type="checkbox"/> Food Service (food worker) <input type="checkbox"/> Health Care (health care worker)				In what geographic location was the patient MOST LIKELY exposed? <input type="checkbox"/> In patient's county of residence <input type="checkbox"/> Outside county, but within NC - County: _____ <input type="checkbox"/> Out of state - State/Territory: _____ <input type="checkbox"/> Out of USA - Country: _____ <input type="checkbox"/> Unknown		

CLINICAL INFORMATION

Is/was patient symptomatic for this disease? ☐ Y ☐ N ☐ U
If yes, symptom onset date (mm/dd/yyyy): ____/____/____
SPECIFY SYMPTOMS:

If a sexually transmitted disease, give specific treatment details:

1. Date patient treated: (mm/dd/yyyy) _____ 2. Date patient treated: (mm/dd/yyyy) _____
Medication _____ Medication _____
Dosage _____ Dosage _____
Duration _____ Duration _____

DIAGNOSTIC TESTING

Provide lab information below OR attach a copy of lab results.

Specimen Date	Specimen #	Specimen Source	Type of Test	Test Result(s)	Description (comments)	Rec'd Date	Lab Name—City/State
/ /						/ /	
/ /						/ /	
/ /						/ /	

Reporting Physician/Practitioner:

Contact Person/Title: _____
Phone: (____) _____-____ Fax: (____) _____-____

Health Care Provider for this disease (if not reporting physician):

Contact Person/Title: _____
Phone: (____) _____-____ Fax: (____) _____-____

LOCAL HEALTH DEPARTMENT USE ONLY

Initial Date of Report to Public Health: ____/____/____
Initial Source of Report to Public Health:

- ☐ Health Care Provider (specify):
☐ Hospital
☐ Private clinic/practice
☐ Health Department
☐ Correctional facility
☐ Laboratory
☐ Other

Is the patient part of an outbreak of this disease?
☐ Yes ☐ No

Outbreak setting:

- ☐ Restaurant/Retail (name): _____
☐ Household (specify index case): _____
☐ Child Care (name): _____
☐ Other (specify): _____
☐ Community (specify index case): _____

Reporting Communicable Diseases – Mecklenburg County

To request N.C. Communicable Disease Report Forms, telephone 704.336.2817 or 704.432.1742
Mark all correspondence "CONFIDENTIAL"

Tuberculosis:

TB Clinic	704.432.2490
Mecklenburg County Health Department	FAX 704.432.2493
2845 Beatties Ford Road	
Charlotte, NC 28216	

Sexually Transmitted Diseases, HIV, & AIDS:

HIV/STD Surveillance	704.432.1742
Mecklenburg County Health Department	FAX 704.336.6200
700 N. Tryon Street, Suite 214	
Charlotte, NC 28202	

All Other Reportable Communicable Diseases including Viral Hepatitis A, B & C:

Report to any of the following nurses:

Freda Grant, RN	704.336.6436
Jane Hoffman, RN,	704.336.5490
Elizabeth Quinn, RN	704.336.5398
Belinda Worsham, RN	704.336.5498
Penny Moore, RN	704.353.1270
Earlene Campbell-Coleman, RN	704.432.1975
Elizabeth Young, RN (Childcare Nurse Consultant)	704.336.5076
Communicable Disease Control	FAX 704.353.1202
Mecklenburg County Health Department	
700 N. Tryon Street, Suite 271	
Charlotte, NC 28202	

Animal Bite Consultation / Zoonoses / Rabies Prevention:

Al Piercy, RS	704.336.6440
Communicable Disease Control	FAX 704.432.6708
Mecklenburg County Health Department	
618 N. College St.	
Charlotte, NC 28202	
or State Veterinarian, Carl Williams, DVM	919.707.5900
State after hours	919.733.3419

Suspected Food borne Outbreaks / Restaurant, Lodging, Pool and Institutional Sanitation:

Food & Facilities Sanitation	(Mon-Fri)	704.336.5100
Mecklenburg County Health Department	(evenings; Sat/Sun)	704.432.1054
700 N. Tryon Street, Suite 208	(pager evenings; Sat/Sun)	704.580.0666
Charlotte, NC 28202	FAX	704.336.5306

Mecklenburg County Health Department